February 2017 – SUPPORT Summary of a systematic review

Do non-specialist health workers improve the care of people with mental, neurological and substance-use disorders?

Non-specialist health workers (including doctors, nurses, lay health workers) who are not specialists in mental health or neurology, but who have some training in these fields, and other professionals, such as teachers, may have an important role to play in delivering mental, neurological or substance-abuse care.

Key messages

➔ **The use of non-specialist health workers in the care of adults with depression, anxiety or both:**

- May increase the number of adults who recover two to six months after treatment
- May reduce symptoms for mothers with depression

➔ **The use of non-specialist health workers in the care of adults with dementia:**

- Probably slightly improves the symptoms of people with dementia
- Probably improves the mental well-being, burden and distress of carers of people with dementia

➔ **The use of non-specialist health workers may decrease the quantity of alcohol consumed in problem drinkers.**

➔ **The use of non-specialist health workers or teachers may reduce the symptoms in adults with post-traumatic stress disorder.**

➔ **It is uncertain whether lay health workers or teachers reduce post-traumatic stress disorder symptoms among children.**

➔ **Most of the included studies were conducted in low-resource settings.**

Who is this summary for?

People making decisions about the use of non-specialist health workers in primary and community healthcare

! This summary includes:

- **Key findings** from research based on a systematic review
- **Considerations about the relevance of this research** for low-income countries

X Not included:

- Recommendations
- Additional evidence not included in the systematic review
- Detailed descriptions of interventions or their implementation

This summary is based on the following systematic review:

van Ginneken N, Tharyan P; Lewin, S, et al. Non-specialist health worker interventions for mental health care in low- and middle- income countries. Cochrane Database Syst Rev 2013; (11): CD009149.

What is a systematic review?

A summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise the relevant research, and to collect and analyse data from the included studies

SUPPORT was an international project to support the use of policy relevant reviews and trials to inform decisions about maternal and child health in low- and middle-income countries, funded by the European Commission (FP6) and the Canadian Institutes of Health Research.

Glossary of terms used in this report: www.supportsummaries.org/glossary-of-terms

Background references on this topic: See back page

Background

In low-income countries, most people with mental, neurological and substance-abuse (MNS) disorders do not receive adequate care, mainly because of a lack of mental health professionals. Non-specialist health workers, as well as other professionals such as teachers, may have an important role to play in delivering MNS healthcare.

How this summary was prepared

After searching widely for systematic reviews that can help inform decisions about health systems, we have selected ones that provide information that is relevant to low-income countries. The methods used to assess the reliability of the review and to make judgements about its relevance are described here: www.supportsummaries.org/how-support-summaries-are-prepared/

Knowing what's not known is important

A reliable review might not find any studies from low-income countries or might not find any well-designed studies. Although that is disappointing, it is important to know what is not known as well as what is known.

A lack of evidence does not mean a lack of effects. It means the effects are uncertain. When there is a lack of evidence, consideration should be given to monitoring and evaluating the effects of the intervention, if it is used.

About the systematic review underlying this summary

Review objective: To assess the effectiveness of the delivery of mental, neurological and substance abuse (MNS) interventions by non-specialist health workers (NSHWs) and other professionals with health roles (OPHRs) in low-and middle-income countries

Types of	What the review authors searched for	What the review authors found
Study designs & Interventions	Randomised trials, non-randomised trials, controlled before-after studies, and interrupted time series studies of NSHW interventions aimed at treating patients with MNS disorders or supporting their carers	38 studies, including randomised trials (27), controlled before-after studies (9) and non-randomised trials (2).
Participants	Adults or children with any MNS disorder seeking primary or community care	Adults (27 studies) and children (11) with depression, anxiety or both (18), post-traumatic stress disorder (12), dementia (2), alcohol abuse (2), schizophrenia (1), substance abuse (1), epilepsy (1), child developmental disorders (1)
Settings	Rural or urban settings in low- and middle-income countries	15 studies from 7 low-income countries and 23 from 15 middle-income countries. 16 studies in rural settings, 23 in urban settings, and 5 in refugee camps
Outcomes	*Primary outcomes:* improvement in symptoms, psychosocial functioning, or quality of life *Secondary outcomes:* patient satisfaction/behaviour, adverse clinical outcomes, carer outcomes, health service/provider delivery-related outcomes	Patient health and psychosocial functioning indicators, carer outcomes
Date of most recent search: June 2012		
Limitations: This is a well-conducted systematic review with only minor limitations		

van Ginneken N, Tharyan P; Lewin, S, et al. Non-specialist health worker interventions for mental health care in low- and middle- income countries. Cochrane Database Syst Rev 2013; (11): CD009149.

Summary of findings

The review included 38 studies, 22 in middle-income countries and 15 in low-income countries. Those conducted in middle-income countries tended to be directed at economically disadvantaged populations.

1) Non-specialist led psychological interventions for depression compared with usual care

Three studies (1082 participants) from urban Taiwan, and rural Pakistan and Uganda that took place mostly amongst economically disadvantaged populations compared a range of psychological interventions (counselling, modified cognitive behaviour therapy and group interpersonal therapy) over a range of sessions delivered in a clinic, in groups, or at home. These were delivered by lay health workers (in Pakistan and Uganda) and by a nurse (Taiwan). Usual care did not involve non-specialist health workers.

➔ **Non-specialist health worker-led psychological interventions may reduce depression prevalence within six months. The certainty of this evidence is low.**

About the certainty of the evidence (GRADE) *

⊕⊕⊕⊕
High: This research provides a very good indication of the likely effect. The likelihood that the effect will be substantially different† is low.

⊕⊕⊕◯
Moderate: This research provides a good indication of the likely effect. The likelihood that the effect will be substantially different† is moderate.

⊕⊕◯◯
Low: This research provides some indication of the likely effect. However, the likelihood that it will be substantially different† is high.

⊕◯◯◯
Very low: This research does not provide a reliable indication of the likely effect. The likelihood that the effect will be substantially different† is very high.

* This is sometimes referred to as 'quality of evidence' or 'confidence in the estimate'.

† Substantially different = a large enough difference that it might affect a decision

See last page for more information.

Non-specialist led psychological interventions for depression

People	Adults with depression
Settings	Low- and middle-income countries (Taiwan, Pakistan, Uganda)
Intervention	Non-specialist health workers conducting psychological interventions
Comparison	Usual available care (primary care, traditional healers)

Outcome	Absolute effects		Relative effect (95% CI)	Certainty of the evidence (GRADE)
	Without non-specialist health workers	**With non specialist health workers**		
Prevalence of depression, 0 to 8 weeks after the intervention	300 per 1000	91 per 1000	RR 0.30 (0.14 to 0.64)	⊕⊕◯◯ Low

Margin of error = Confidence interval (95% CI) RR: Risk ratio GRADE: GRADE Working Group grades of evidence (see above and last page)

2) Collaborative care for depression, anxiety or both compared with usual care

Three studies (2380 participants) from urban Chile, and urban and rural India that took place mostly amongst economically disadvantaged populations provided a variety of care depending on the severity and progress of the depressed patients. This involved an existing primary health team within a clinic (doctors, nurses, social workers and midwives) who received additional training in mental healthcare, with the addition of specialist supervision (all), and a lay counsellor (India). Their roles were to diagnose, treat (psychotropic drugs and/or counselling), follow up, and refer. Usual care was where primary healthcare staff did not receive training or receive input from a specialist (but did receive a training manual in the study in India).

➔ **Non-specialist health workers within a collaborative care model may reduce the prevalence of depression, anxiety or both within six months. The certainty of this evidence is low.**

Collaborative care for depression, anxiety or both compared with usual care

People	Adults with depression, anxiety or both
Settings	Middle-income countries (Chile, India)
Intervention	Collaborative care model (non-specialist health worker plus specialist supervision)
Comparison	Usual primary health care

Outcome	Absolute effects		Relative effect (95% CI)	Certainty of the evidence (GRADE)
	PHC team without collaborative care model	**PHC team with collaborative care model**		
Prevalence of depression, anxiety or both, 2 to 6 months after the intervention	205 per 1000	140 per 1000	RR 0.63 (0.44 to 0.90)	⨁⨁◯◯ Low

Margin of error = Confidence interval (95% CI) RR: Risk ratio GRADE: GRADE Working Group grades of evidence (see above and last page)

3) Non-specialist health workers treating maternal depression compared with usual care

Four studies (1213 participants) from urban Chile, Jamaica and Taiwan and rural Pakistan that took place mostly amongst economically disadvantaged populations provided a variety of care to mothers with depression. This varied from counselling to specific psychological interventions and one study in Chile was a collaborative care model by lay health workers (Jamaica, Pakistan) and nurse/midwives (Chile, Taiwan). Usual care was where existing non-specialists did not receive training.

➔ **Non-specialist health workers may reduce the severity of maternal depressive symptoms. The certainty of this evidence is low.**

Non-specialist health workers treating maternal depression compared with usual care

People	Adult women with maternal depression
Settings	Low- and middle-income countries (Chile, Jamaica, Pakistan, Taiwan)
Intervention	Non-specialist led health workers
Comparison	Usual available care (primary or perinatal care)

Outcomes	**Impact**	Certainty of the evidence (GRADE)
Severity of symptoms of maternal depression, 0 to 12 months after the intervention	Non-specialist health workers reduced the severity of maternal/perinatal depressive symptoms (SMD -0.42, 95%CI -0.58 to -0.26).	⨁⨁◯◯ Low

CI: confidence interval; SMD: standardized mean difference SMD: standardized mean difference
GRADE: GRADE Working Group grades of evidence (see above and last page)

4) Non-specialist health workers treating depression compared with specialists

Two studies (768 participants) from urban Hungary and Argentina examined how effective pharmacological treatment for depression was when provided by primary care physicians compared with specialists. Both groups received a protocol to follow for treatment.

➔ **It is uncertain whether non-specialist health workers are equivalent to specialists in delivering pharmacotherapy for depression. The certainty of this evidence is very low.**

Non-specialist health workers treating depression compared with specialists		
People	Adults with depression	
Settings	Middle-income countries (Argentina, Hungary)	
Intervention	Non-specialists (primary care physicians) providing pharmacological intervention	
Comparison	Specialists providing pharmacological intervention	
Outcomes	**Impact**	Certainty of the evidence (GRADE)
Severity of depression, 0 to 56 days after the intervention	It is uncertain whether primary care physicians are equivalent to specialists in delivering pharmacotherapy because of the very low certainty of evidence. The results suggest that the effects of primary care physicians might be similar to that of specialists (MD -0.90, 95% CI -1.20 to -0.60).	⊕◯◯◯ Very low

CI: confidence interval; MD: mean difference
GRADE: GRADE Working Group grades of evidence (see above and last page)

5) Non-specialist health workers treating adults with post-traumatic stress disorder

Three studies (223 participants) from Bosnia, Burundi and Uganda took place in internally displaced camps and refugee settlements. Non-specialists (lay health workers) and pre-school teachers (Bosnia) delivered psychological interventions over different lengths of time to adults/mothers. Usual care consisted of receiving usual medical care without the non-specialist or teacher-led intervention.

➔ **Non-specialist health workers and teachers may improve post-traumatic stress disorder symptoms. The certainty of this evidence is low.**

Non-specialist health workers treating adults with post-traumatic stress disorder

People	Adults with post-traumatic stress disorder
Settings	Low- and middle-income countries (Bosnia, Burundi, Uganda)
Intervention	Non-specialists and teachers delivering psychological interventions (narrative exposure therapy, trauma counselling and workshops with psychoeducation)
Comparison	Usual medical care

Outcomes	**Impact**	Certainty of the evidence (GRADE)
Severity of symptoms of post traumatic stress disorder symptoms, 2 weeks to 6 months after the intervention	Non-specialist health workers and teachers may improve post traumatic stress disorder symptoms (SMD -0.36, 95%CI -0.67 to -0.05).	⨁⨁◯◯ Low

CI: confidence interval; SMD: standardized mean difference
GRADE: GRADE Working Group grades of evidence (see above and last page)

6) Non-specialist health workers supporting dementia patients and carers

Two studies (134 participants) from urban India and Russia evaluated brief interventions directed at carers of people with dementia delivered by lay health workers (India) and doctors (Russia).

➔ **Non-specialist health workers probably slightly improved behavioural symptoms in patients. The certainty of this evidence is moderate.**

➔ **Non-specialist health workers probably led to improvements in carers' burden, mental health status, and distress. The certainty of this evidence is moderate.**

Non-specialist health workers supporting dementia patients and carers

People	People with dementia and their carers
Settings	Middle-income countries (India, Russia)
Intervention	Non-specialist led brief intervention
Comparison	Usual available medical care

Outcomes	**Impact**	Certainty of the evidence (GRADE)
Severity of patient behavioural symptoms, 6 months after the intervention	Non-specialist health workers probably slightly improved patient behavioural symptoms (SMD -0.26, 95%CI -0.60 to -0.08).	⊕⊕⊕◯ Moderate
Severity of carer burden, 6 months after the intervention	Non-specialist health workers probably improved carers' burden (SMD -0.50, 95%CI -0.84 to -0.15).	⊕⊕⊕◯ Moderate

CI: confidence interval; SMD: standardized mean difference
GRADE: GRADE Working Group grades of evidence (see above and last page)

7) Non-specialist health workers treating alcohol-use disorders

Two studies (167 participants) from rural Thailand and urban Kenya evaluated brief interventions (motivational enhancement therapy (MET) and cognitive behaviour therapy) delivered by lay health workers (Kenya) or existing nurses with specific training in MET (Thailand). Usual care consisted of general medical care.

➔ **Non-specialist health workers may reduce the amount of alcohol consumed by heavy drinkers. The certainty of this evidence is low.**

Non-specialist health workers treating alcohol-use disorders		
People	Adults with alcohol-use disorders	
Settings	Low- and middle-income countries (Kenya, Thailand)	
Intervention	Non-specialist led brief alcohol interventions	
Comparison	Usual available medical care	
Outcomes	**Impact**	Certainty of the evidence (GRADE)
Amount of alcohol consumed, 3 to 6 months after the intervention	Non-specialist health workers may reduce the amount of alcohol consumed by heavy drinkers by nearly two drinks per day (MD -1.68, 95%CI -2.79 to -0.57).	⨁⨁◯◯ Low

CI: confidence interval; MD: mean difference
GRADE: GRADE Working Group grades of evidence (see above and last page)

8) Non-specialist health workers in treating children with post-traumatic stress disorder

Three studies (298 participants) from Sri Lanka, Kosovo and Uganda delivered psychosocial interventions to children with post-traumatic stress disorder. These were led by teachers in internally displaced camps (Sri Lanka and Kosovo) and by lay health workers to child soldiers at their home (Uganda). Usual care was where existing non-specialists did not receive training.

➔ **It is uncertain whether non-specialist health workers and teachers reduce the severity of post-traumatic stress disorder symptoms in children. The certainty of this evidence is very low.**

Non-specialist health workers in treating children with post-traumatic stress disorder

People	Children with post-traumatic stress disorder
Settings	Low- and middle-income countries (Kosovo, Sri Lanka, Uganda)
Intervention	Non-specialist led psychosocial interventions (narrative exposure therapy, mind body techniques, coping strategies etc.)
Comparison	Usual available care

Outcomes	**Impact**	Certainty of the evidence (GRADE)
Severity of post-traumatic stress disorder symptoms, 1 to 6 months after the intervention	It is uncertain whether non-specialist health workers reduce the severity of post-traumatic stress disorder symptoms because of the very low certainty of the evidence, although there appeared to be a large clinical benefit (SMD -0.89, 95%CI -1.49 to -0.30).	⊕◯◯◯ Very low

CI: confidence interval; SMD: standardized mean difference
GRADE: GRADE Working Group grades of evidence (see above and last page)

Relevance of the review for low-income countries

➔ Findings	▷ Interpretation*
APPLICABILITY	
➔ **The studies covered by the review came from a range of low- and middle-income countries, most of which were located in low-resource settings.**	▷ *The findings from middle-income countries may also be applicable to low-income countries.* ▷*In general, the absolute effects of introducing non-specialist health worker programmes are likely to be larger in settings where outcomes for usual care are worse than the median reported in these studies and smaller in settings where outcomes are better.*
➔ **The studies only compared interventions to usual or no care. There were not comparisons to care delivered by specialists.** ➔ **Interventions were delivered in a research context.** ➔ **Studies from low-income countries tended to use lay health workers, and those from middle-income countries used professionals (such as nurses).**	▷ *Non-specialist health workers may have been more likely to have been carefully selected, better remunerated, and supervised and monitored more intensively; and project leaders may have been more motivated than in non-research contexts.* ▷ *These limitations highlight particular factors that may be relevant when deciding on the applicability of findings to your settings:* - *Are there any on-the-ground constraints within or outside the health sector (e.g. a suitable place to deliver the services)?* - *What are the current health service arrangements (including the types of existing health workers, potential supervisors, and financing mechanisms) and how do these compare to those in the studies?* - *Are there specific groups who might benefit more from the intervention?* - *Are routine data available on who might benefit from the intervention and for monitoring and evaluation?*
➔ **There were too few studies and insufficient detailed description of interventions to provide guidance on the type of non-specialist, the amount and type of training and supervision they may require, or on the type and intensity of intervention. However most studies provided a more intensive intervention than what was otherwise available.**	▷ *Decision-makers should consider the current capacity for training and supervision of non-specialist health workers, and how to increase the quantity and quality of it.* ▷ *Consideration should also be given to evaluating interventions, so as to add to the available evidence on types and intensity of interventions and supervision.*
➔ **No included studies addressed the impact of delivering mental health care on other elements of non-specialist health workers' roles (such as on their other tasks like diabetes care, or on their working pattern).**	▷ *Consideration should be given to potential impacts on health workers, including possible effects on other healthcare provision and on consultation time.*
EQUITY	
➔ **There was no evidence of differential effects for disadvantaged groups.** ➔ **Some post-traumatic stress interventions had sex-specific leaders for their interventions.**	▷ *Sex-specific interventions may be worth considering for certain interventions, particularly in the context of post-conflict settings.* ▷ *Certain interventions required people to travel to a clinic or health centre, and were very intensive, which may disadvantage those with few financial resources or those with inflexible working conditions.*
ECONOMIC CONSIDERATIONS	
➔ **Few studies performed cost-effectiveness analyses.** ➔ **Three studies suggest non specialists are potentially cost effective.**	▷ *As the costs of these interventions are likely to be highly variable, consideration must be given to what the financial burden and indirect costs of specific interventions in specific settings would be, including:* - *health service costs*

	- *health workers costs* - *patients or carer costs (including travel and impact on their employment status)* ▷ *Consideration should be given to undertaking a cost-effectiveness analysis before scaling up any non-specialist health worker intervention.*
MONITORING & EVALUATION	
➔ **Limited evidence was found and much of it was of low or very low certainty.** ➔ **Few studies measured adverse consequences.** ➔ **These studies were not designed to address questions about the sustainability or acceptability of the interventions.**	▷ *Given the limitations of the evidence and the lack of evidence regarding adverse consequences, consideration should be given to conducting an impact evaluation before scaling up use of any intervention.* ▷ *Consideration should be given to evaluating the acceptability and feasibility of interventions, as well as impacts.* ▷ *As there is uncertainty about the sustainability of these interventions, longitudinal studies, economic evaluations, and qualitative studies might be needed to reduce this uncertainty.*

*Judgements made by the authors of this summary, not necessarily those of the review authors, based on the findings of the review and consultation with researchers and policymakers in low-income countries. For additional details about how these judgements were made see: www.supportsummaries.org/methods

Additional information

Related literature

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Conflict of interest

Vikram Patel is a co-author of some included studies. Nadja van Ginneken, Prathap Tharyan, Simon Lewin and Vikram Patel are authors on the review on which this summary is based. For details, see: www.supportsummaries.org/coi

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This review should be cited as

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The vision of **Cochrane South Asia** is that all decisions regarding health care in the region should be informed by reliable and relevant evidence.

About certainty of the evidence (GRADE)

The "certainty of the evidence" is an assessment of how good an indication the research provides of the likely effect; i.e. the likelihood that the effect will be substantially different from what the research found. By "substantially different" we mean a large enough difference that it might affect a decision. These judgements are made using the GRADE system, and are provided for each outcome. The judgements are based on the study design (randomised trials versus observational studies), factors that reduce the certainty (risk of bias, inconsistency, indirectness, imprecision, and publication bias) and factors that increase the certainty (a large effect, a dose response relationship, and plausible confounding). For each outcome, the certainty of the evidence is rated as high, moderate, low or very low using the definitions on page 3.

For more information about GRADE: www.supportsummaries.org/grade

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The Cochrane Effective Practice and Organisation of Care Group (EPOC) is part of the Cochrane Collaboration. The Norwegian EPOC satellite supports the production of Cochrane reviews relevant to health systems in low- and middle-income countries . www.epocoslo.cochrane.org

The Evidence-Informed Policy Network (EVIPNet) is an initiative to promote the use of health research in policymaking in low- and middle-income countries. www.evipnet.org

The Alliance for Health Policy and Systems Research (HPSR) is an international collaboration that promotes the generation and use of health policy and systems research in low- and middle-income countries. www.who.int/alliance-hpsr

Norad, the Norwegian Agency for Development Cooperation, supports the Norwegian EPOC satellite and the production of SUPPORT Summaries. www.norad.no

The Effective Health Care Research Consortium is an international partnership that prepares Cochrane reviews relevant to low-income countries. www.evidence4health.org

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